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INFORMATION DISCL	OSURE	_
STATEMENT BY APP	LICANT	

(37 CFR 1.98(b))

Attorney Docket No.: S&ZFH030507

Applic. No.

10/727,802

Applicant

Heiko Schwarz et al.

Filing Date

Group Art Unit

December 4, 2003

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U.S. PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

/TV/	0	Jukka Teuhola: "A Compression Method For Clustered Bit-Vectors", Information processing Letters, Vol. 7, No. 6, October 1978, pp. 308-311, XP-001000934
/TV/	P	Detlev Marpe et al.: "Video Compression Using Context-Based Adaptive Arithmetic Coding", IEEE 2001, pp. 558-561, XP-10563407A
EXAMINER		DATE CONSIDERED

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

-	/TV/		Timothy Bell et al.: "Compression of Sparse Matrices by Arithmetic Coding", Data Compression Conference, 1998, DCC '98 Proceedings, Snowbird, UT, USA, March 30 – April 1, 1998, IEEE Press, March 30, 1998, pp. 23-32, XP-010276609
	πvi	P	Gisle Bjontegaard: "Improved low complexity entropy coding for transform coefficients", Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC JTC1/SC29/WG11 and ITU-T SG16 Q.6), 2 nd Meeting, Geneva, Switzerland, January 29, 2002, pp. 1-8, XP002257294

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U.S. DEPARTM PATENT AND T	ENT OF COMMERCE RADEMARK OFFICE REMATION DISCLOSURE TEMENT BY APPLICANT (37 CFR 1.98(b))	Attorney Docket No.: Applic. No. S&ZFH030507 10/727,802 Applicant Heiko Schwarz, et al. Filing Date Group Art Unit December 4, 2003 2613
OTH	IER DOCUMENTS (Including Au	thor, Title, Date, Pertinent Pages, etc.)
/TV/	International Standard Jo ISO/IEC 14496-10 AVC).	-T Recommendation and Final Draft sint Video Specification (ITU-T Rec. H.264I From: Joint Video Team (JVT) of ISO/IEC SO/IEC JTC1/SC29/WG11 and ITU-T SG16
/TV/	Author: Thomas Wiegan	of the H.264/AVC Video Coding Standard. Id, Gary J. Sullivan, Senior Member, IEEE, Ajay Luthra, Senior Member, IEEE. Pages:
/TV/	Pictures and Associated	on Technology-Generic Coding Moving Audio Information: Video. From: International Inmendation ITU-T H.26. Pages: 1-224.
/TV/	1 1	t of Recommendation H.263 Version 2 From: International Telecommunication Union.
/TV/	Objects-Part 2: Visual. Standardization Organiza	on Technology-Coding of Audio Visual From: International Organization for a little international Normalization ISO/IEC and of Moving Picture and Audio. Pages: 1-
/TV/	[ing for Motion Video Storage Using Adaptive or: C.A. Gonzalez, L. Allman, T. McCarthy, P.
/TV/	· .	Codes for H.26L. From: ITU - ndardization Sector. Pages: 1-7
/TV/		esults for CABAC Entropy Coding Scheme. ications Standardization Sector. Pages: 1-8.

r	
/TV/	Ref 1.09: Title: Improved CABAC. From: Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-6.
	Ref 1.10: Title: New Results in Improved CABAC. From: Joint Video
/TV/	Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC
	JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-12.
/TV/	Ref 1.11: Title: Improved CABAC. From: ITU-Telecommunications
	Standardization Sector. Pages: 1-9.
	Ref 1.12: Title: Fast Arithmetic Coding for CABAC. From: Joint Video
/TV/	Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC
	JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-11.
T. //	Ref 1.13: Title: CABAC and Slices. From: Joint Video Team (JVT) of
/TV/	ISO/IEC MPEG & ITU-T VCEG (ISO/IEC JTC1/SC29/WG11 and ITU-T
	SG16 Q.6). Pages: 1-17.
	Ref 1.14: Title: Analysis and Simplification of Intra Prediction. From:
/TV/	Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC
	JTC1/SC29/WG11 and ITU-T SG16 Q.6).
	Ref 1.15: Title: Proposed Cleanup Changes for CABAC. From: Joint
/TV/	Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC
	JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-7.
/TV/	Ref 1.16: Title: CABAC Cleanup and Complexity Reduction. From: Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC
	JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-20. Ref 1.17: Title: Final CABAC Cleanup. From: Joint Video Team (JVT)
	of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC JTC1/SC29/WG11 and
/TV/	ITU-T SG16 Q.6). Pages: 1-24.
	Ref 1.18: Title: Very Low Bit-Rate Video Coding Using Wavelet-Based
<i> </i> TV	Techniques. Author: Detley Marpe and Hans L. Cycon. Pages: 85-94
	Ref 1.19: Title: Wavelet-Based Very Low Bit-Rate Video Coding Using
/TV/	Image Warping and Overlapped Block Motion Compensation. Author:
	G. Heising, D. Marpe, H.L. Cycon and A.P. Petukhov. Pages: 93-101. Ref 1.20: Title: Motion-Compensated 3-D Subband Coding of Video.
/TV/	Author: Seung-Jong Choi and John W. Woods, Fellow IEEE. Pages: 155-167.
	Ref 1.21: Title: A New Fast and Efficient Image Codec Based on Set
/TV/	Partitioning in Hierarchical Trees*. Author: Amir Said (Faculty of Electrical Engineering) and William A. Pearlman (Department of
	Electrical, Computer, and Systems Engineering Renesselar Polytechnic
	Institute). Pages: 1-15. Ref 1.22: Title: Efficient Pre-Coding Techniques for Wavelet-Based
/TV/	Image Compression. Author: Detlev Marpe & Hans L. Cycon. Pages:
	45-51.
L	

	Ref 1.23: Title: Universal Modeling and Coding. Author: Jorma
/TV/	Rissanen and Glen G. Langdon, Jr., Senior Member, IEEE. Pages: 12-
	23.
	Ref 1.24: Title: Universal Coding Information, Prediction, and
Т V/	Estimation. Author: Jorma Rissanen. Pages: 629-636.
	Ref 1.27: Title: Applications of Universal Context Modeling to Lossless
	Compression of Grey-Scale Images. Author: Marcelo J. Weinberger,
_{/TV/}	Member, IEEE, Jorma J. Rissanen, Senior Member, IEEE, and Ronald
] /۱٧/]	B. Arps. Pages: 575-586.
<u> </u>	Ref 1.29: Title: A Compression Method for Clustered Bit-Vectors.
_{/TV/}	Author: Jukka Teuhola (Department of Computer Science, University
''''	
ļ i	of Turka). Application: XP-001000934.
ĺ ·	Ref 1.30: Title: Optimal Source Codes for Geometrically Distributed
/TV/	Integer Alphabets. Author: Robert G. Gallager, fellow, IEEE, David C.
	Vanvoorhis, member, IEEE. Pages: 228-230.
/D//	Ref 1.32: Title: An Overview of the Basic Principles of the Q-Coder
/TV/	Adaptive Binary Arithmetic Coder. Author: W.B. Pennebaker, J.L.
	Mitchell, G.G. Langdon, Jr., and R.B. Arps. Pages: 717-726.
	Ref 1.31: Title: A Context Modeling Algorithm and its Application in
/TV/	Video Compression. Author: Marta Mrak, Detlev Marpe, and Thomas Wiegand.
/T) //	Ref 1.33: Title: A Muliplication-Free Multialphabet Arithmetic Code.
/TV/	Author: Jorma Rissanen and K.M. Mohiuddin. Pages: 93-98.
/TV/	Ref 1.34: Title: Practical Implementations of Arithmetic Code. Author:
/17/	Paul G. Howard and Jeffrey Scott Vitter. Pages: 1-30.
T. //	Ref 1.35: Title: Sample Data Coding. From: Chapter 12. Pages: 474-
/TV/	484.
	Ref 1.37: Title: Arithmetic Code Revisited. Author: Alistair Moffat (The
· /TV/	University of Melbourne), Radford M. Neal (University of Toronto), and
	Ian H. Witten (zthe University of Waikato). Pages: 257-294.
	Ref 1.38: Title: Rate-Constrained Coder Control and Comparison of
	Video Coding Standards. Author: IEEE Transactions on Circuits and
/TV/	Systems for Video Technology, Vol. 13, No. 7, July 2003. Thomas
	Wiegand, Heiko Schwarz, Anthony Joch, Faouzi Kossentini, Senior
	Members, IEEE, and Gary J. Sullivan, Senior Member, IEEE.
j	Pages: 689-703.

	Ref 2.1: Title: Draft ITU-T Recommendation and Final Draft
	International Standard of Joint Video Specification (ITU-T rec. H.264 I
/TV/	ISO/IEC 14496-10 AVC). From: Joint Video Team (JVT) of SO/IEC
	MPEG & ITU-T VCEG (ISO/IEC JTC1/SC29/WG11 and ITU-T SG 16
	Q.6). Pages 1-249.
	Ref 2.03x: Title: Line Transmission of Non-Telephone Signals / Video
m. "	Codec for Audiovisual Services AT p x 64 kbit/s. From: International
/TV/	Telecommunication Union H.261. Pages: 1-25.
/TV/	Ref 2.06x: Title: H.264/AVC Over IP. From: Stephan Wenger. Pages:
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	645-656.
	Ref 2.07: Title: H.264/AVC in Wireless Environments. Author:
/TV/	Thomas Stockhammer, Miska M. Hannuksela, and Thomas Wiegand.
]	Pages: 657-673.
/TV/	Ref 2.08: Title: Motion-and Aliasing-Compensated Prediction for Hybrid
/10/	Video Coding. Author: Thomas Wedi and Hand Georg Musmann. Pages: 577-586.
	Ref 2.9: Title: Long-Term Memory Motion-Compensated Prediction.
/TV/	Author: Thomas Wiegand, Xiaozheng Zhang, and Bernd Girod, Fellow, IEEE. Pages: 70-84.
ΛV/	Ref 2.11: Title: A Locally Optimal Design Algorithm for Block-Based
/1 //	Multi-Hypothesis Motion-Compensated Prediction. Author: Markus Flierl, Thomas Wiegand, and Bernd Girod Telecommunications
	Laboratory University of Erlangen-Nürnberg, Germany. Pages: 1-10.
	Ref 2.12: Title: Generalized B Pictures and the Draft H.264/AVC Video-
/TV/	Compression Standard. Author: Markus Flierl, Student Member, IEEE,
	and Bernd Girod, Fellow, IEEE. Pages: 587-597.
/TV/	Ref 2.13: Title: Rate-Constrained Coder Control and Compression of
'' ''	Video Coding Standards. From: Thomas Wiegand, Heiko Schwarz,
	Anthony Joch, Faouzi Kossentini, Senior Member, IEEE, and Gary J.
	Sullivan, Senior Member, IEEE. Pages: 688-703.
/TV/	Ref 2.14: Title: H.264/AVC Over IP. Author: Stephan Wenger. Pages: 645-656.
	Ref 2.15: Title: The SP-and Si-Frames Design for H.264/AVC. Author:
/TV/	Marta Karcewicz and Ragip Kurceren, Member, IEEE. Pages: 637-
	644.
	Ref 2.16: Title: Context-Based Adaptive Binary Arithmetic Coding in the
J	H/264/AVC Video Compression Standard. Author: Detlev Marpe,
/TV/	Member, IEEE, Heiko Schwarz, and Thomas Wiegand. Pages: 620-
	636.

		Ref 2.17: Title: Low-Complexity Transform and Quantization in	
/τv/	H.264/AVC. From: Henr	H.264/AVC. From: Henrique S. Malvar, Fellow, IEEE, Antti Hallapuro,	
	Marta Karczewicz, and Le	Marta Karczewicz, and Louis Kerofsky, Member, IEEE. Pages: 598-	
	603.	603.	
/TV/	Ref 2.18: Title: Adaptive	Ref 2.18: Title: Adaptive Deblocking Filter. Author: Peter List, Anthony	
	Joch, Jani Lainema, Gisle	Joch, Jani Lainema, Gisle Bjontegaard, and Marta Karczewicz. Pages:	
	614-619.		
/TV/	H.264/AVC. Author: Jor	lized Hypothetical Reference Decoder for di Ribas-Cobrera, Member, IEEE, Philip A. EE, and Shankar L. Regunathan. Pages:	
	Ref A: Title: Draft ITU-T	Recommendation and Final Draft International	
	Standard of Joint Video S	Standard of Joint Video Specification (ITU-T Rec. zh.264 I ISO/IEC	
/TV/	14496-10 AVC). From: .	14496-10 AVC). From: Joint Video Team (JVT) of ISO/IEC MPEG &	
	ITU-T VCEG (ISO IEC JT	ITU-T VCEG (ISO IEC JTC1/SC29/WG11 and ITU-T SG16 Q.6).	
	Pages: 1-253.	Pages: 1-253.	
	Ref B: Title: A Highly Eff	Ref B: Title: A Highly Efficient Multiplication-Free Binary Arithmetic	
	Coder and its Application	Coder and its Application in Video Coding. Author: Detlev Marpe and	
/TV/	Thomas Wiegand. Page:	Thomas Wiegand. Pages: 1-4.	
	Ref C: Title: Proposed Ed	Ref C: Title: Proposed Editorial Changes and Cleanup of CABAC.	
/TV/	From: Joint Video Team	From: Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG	
	(ISO.IEC JTC1/SC29/WG	(ISO.IEC JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-10.	
/TV/	(ITU-T Rec. H.264 I ISO/I (JVT) of ISO/IEC MPEG (and ITU-T SG16 Q.6). Page 1	Ref D: Title: Study of Final Committee Draft of Joint Video Specification (ITU-T Rec. H.264 ISO/IEC 14496-10 AVC). From: Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO.IEC JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-239.	
/5//	Ref E: Title: Study of Final	Ref E: Title: Study of Final Committee Draft and Joint Video	
/TV/	Specification (ITU-T Rec.	Specification (ITU-T Rec. H.264 I ISO/IEC 14496-10 AVC). From: Joint	
/TV/		Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO.IEC	
	•	JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-227.	
/TV/	ISO/IEC MPEG & ITU-T \	Ref F: Title: CABAC and Slices. From: Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO.IEC JTC1/SC29/WG11 and ITU-T SG16 Q.6). Pages: 1-17.	
EXAMINER	/Tung Vo/	DATE CONSIDERED	
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